Preliminary Claim Amendment

【Claim 1】

A method for manufacturing a lens assembly of an electron beam microcolumn having a plurality of microlenses each provided with a hole at a central position thereof, and a plurality of insulating layers alternately interposed between the microlenses, the method comprising:

forming at least one first microlens assembly set by anodic-bonding an insulating layer and a microlens together so that a part of a surface of the insulating layer is not covered with the microlens;

layering the first microlens assembly set on a second microlens or a second microlens assembly set while aligning the holes of the microlenses, so that the second microlens or the microlens of the second microlens assembly set is in contact with the insulating layer of the first microlens assembly set, while the part of the insulating layer of the first microlens assembly set not covered by the first microlens is in contact with the second microlens or the microlens of the second microlens assembly set; and

scanning a laser beam to bond the part of the insulating layer of the first microlens assembly set not covered by the first microlens to the second microlens or the microlens of the second microlens assembly set by passing the laser beam through the part of the insulating layer of the first microlens assembly set, thus welding the

first microlens assembly set to the second microlens or the microlens of the second microlens assembly set.

【Claim 2】

The method according to claim 1, wherein the microlens and the insulating layer of each of the microlens assembly sets are anodic-bonded together after the microlens of each of the microlens assembly sets is rotated on the insulating layer around the hole thereof at a predetermined angle.

【Claim 3】

The method according to claim 1, wherein the microlens assembly sets are arranged while rotating the first microlens assembly set on the second microlens assembly set around the holes at a predetermined angle, so that the insulating layer of the first microlens assembly set and the microlens of the second microlens assembly set form a path of the laser beam during the scanning of the laser beam, thus forming a welding spot on both the insulating layer of the first microlens assembly set and the microlens of the second microlens assembly set.

【Claim 4】

The method according to claim 1, wherein each of the holes is circular or polygonal.

【Claim 5】

The method according to claim 1, further comprising:

anodic-bonding the microlens assembly sets together after the scanning of the laser beam.

【Claim 6】

The method according to claim 1, wherein the anodic-bonding is executed by bringing a flat plate electrode having a wide contact surface into contact with an upper surface of the microlens.

【Claim 7】

The method according to claim 1, wherein the part of the microlens that is not covered is provided with a wiring connection.

【Claim 8】

A lens assembly manufactured through the method according to claim 1.

【Claim 9】

A lens assembly according to claim 8, wherein the anodic-bonding is executed by bringing a flat plate electrode having a wide contact surface into contact with an upper surface of the microlens, in order to assemble the lens assembly sets.

【Claim 10】

The method according to claim 2, wherein the microlens assembly sets are arranged while rotating the first microlens assembly set on the second microlens assembly set around the holes at a predetermined angle, so that the insulating layer of the first microlens assembly set and the microlens of the second microlens assembly set form a path of the laser beam during the scanning of the laser beam, thus forming a welding spot on both the insulating layer of the first microlens assembly set and the microlens of the second microlens assembly set.

【Claim 11】

The method according to claim 2, wherein each of the holes is circular or polygonal.

【Claim 12】

The method according to claim 2, further comprising:

anodic-bonding the microlens assembly sets together after the scanning of the laser beam.

【Claim 13】

The method according to claim 2, wherein the anodic-bonding is executed by bringing a flat plate electrode having a wide contact surface into contact with an upper surface of the microlens.

【Claim 14】

The method according to claim 2, wherein the part of the microlens that is not covered is provided with a wiring connection.

【Claim 15】

A lens assembly manufactured through the method according to claim 2.

【Claim 16】

A lens assembly according to claim 15, wherein the anodic-bonding is executed by bringing a flat plate electrode having a wide contact surface into contact with an upper surface of the microlens, in order to assemble the lens assembly sets.

【Claim 17】

The method according to claim 3, wherein each of the holes is circular or polygonal.

【Claim 18】

The method according to claim 3, further comprising:

anodic-bonding the microlens assembly sets together after the scanning of the laser beam.

【Claim 19】

The method according to claim 3, wherein the anodic-

bonding is executed by bringing a flat plate electrode having a wide contact surface into contact with an upper surface of the microlens.

【Claim 20】

The method according to claim 4, further comprising:

anodic-bonding the microlens assembly sets together after the scanning of the laser beam.